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WPI Acc No: 1994-217870/199426

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Use of gene encoding oxalic acid degrading enzyme - for plant cell selection, esp. gene coupled to gene-encoding protein conferring pathogen resistance

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Number of Countries: 022 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9413790	A1	19940623	WO 93FR1203	A	19931207	199426	B
AU 9456532	A	19940704	AU 9456532	A	19931207	199437	
EP 672124	A1	19950920	WO 93FR1203	A	19931207	199542	
			EP 94901995	A	19931207		
US 6187571	B1	20010213	WO 93FR1203	A	19931207	200111	
			US 95448398	A	19951024		

Priority Applications (No Type Date): FR 9214721 A 19921207

Cited Patents: 01Jnl.Ref; WO 9201792; WO 9214824; WO 9215685

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9413790	A1	F	64	C12N-009/02	

Designated States (National): AU CA JP NZ US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE

AU 9456532	A	C12N-009/02	Based on patent WO 9413790
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EP 672124	A1	F	C12N-009/02	Based on patent WO 9413790
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Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

US 6187571	B1	C12N-015/09	Based on patent WO 9413790
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Abstract (Basic): WO 9413790 A

Use of a DNA sequence (I) encoding a protein (II) able to degrade oxalic acid as a selection agent for plant cells is new. Partic. (I) is coupled to a sequence of interest and (II) is (a) a decarboxylase or (b) esp. an oxalate oxidase (IIa). The sequences of a pref. (IIa), 224 aminoacids, and of the DNA encoding it (672 bp) are reproduced in the specification.

Transformed calli etc. are selected in a medium contg. oxalic acid an Ca in presence of a chelating agent (esp. EDTA or EGTA) with higher affinity for Ca then oxalic acid.

USE - (I), coupled to (III), is used to select calli and transformed plants (esp. Nicotiana tabacum, Helianthus annuus or Brassica napus) by enabling survival on oxalic acid contg. medium Partic. encodes an enzyme which imparts resistance to pathogens, esp. an endochitinase which is active against many fungi, insects and nematodes. Apart from providing selection, (I) also protects against oxalic acid, a phytotoxin produced b many fungi.

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Title Terms: GENE; ENCODE; OXALIC; ACID; DEGRADE; ENZYME; PLANT; CELL; SELECT

GENE; COUPLE; GENE; ENCODE; PROTEIN; CONFER; PATHOGEN; RESISTANCE
Derwent Class: C06; D16; P13
International Patent Class (Main): C12N-009/02; C12N-015/09
International Patent Class (Additional): A01H-005/00; A01N-063/00; C12N-005/1
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File Segment: CPI; EngPI
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C14-B04B; D05-H09; D05-H12A; D05-H14B3; D05-H19
Chemical Fragment Codes (M1):
01 M423 M710 M903 Q233 V753
02 M423 M720 M903 N135 P001 P002 P241 P341 P345 P831 Q233 V802 V811

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